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The PSI-Process Scales. A new measure to assess the intensity and breadth of parasocial processes

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Abstract

Research on parasocial interactions (PSI) and parasocial relationships (PSR) refers back to a tradition of 50 years. However, research on both phenomena still suffers from overlapping definitions and resulting measurements that do not distinguish between PSI and PSR. The present study presents a post-exposure measurement tool (the PSI-Process Scales) that aims to measure PSI instead of PSR. It is derived from a theoretical model that specifically focuses on PSI. Psychometric analyses indicate the tool's high usability. It is capable of displaying both the intensity and the dimensionality of PSI. It can be applied to measure both positive and negative PSI across all TV formats, without changing the item wording. In sum, the PSI-Process-Scales may offer a valuable alternative for researchers in the field, specifically if they want to assess parasocial processes that take place throughout TV exposure.

Keywords: parasocial interactions, parasocial relationships, scale development, media characters, reception processes, media use

Introduction

The term 'parasocial interaction' (PSI) was first used by Horton and Wohl (1956) to describe viewers' responses to media characters (called 'personae') during media consumption. Horton and Strauss (1957) specified these first systematic descriptions and observations on PSI as well as on more long-term responses to personae, known as parasocial relationships (PSR). PSI as a mediated form of social interaction and communication is one-sided because the personae's action can be observed by the media user, whereas the media user's reaction can only be anticipated, but not directly observed by the personae. Thus, PSI shows similarities to forms of asymmetrical interactions in interpersonal communication (Schramm, 2008).

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Horton and Wohl (1956) considered the seemingly interaction between media users and personae as one of the most central attributes of mass media consumption. Television, as an audio-visual medium, ought to be even more able to constitute an illusion of a face-to-face interaction. A notable characteristic of PSI is that in spite of the missing feedback, channel viewers often feel addressed by the personae (Auter and Davis, 1991). Accordingly, research has shown that the same key impulses that play an important role in social interactions are relevant for the constitution of PSI as well. For example, users automatically respond to nonverbal and verbal addressing performances of the personae (Auter and Davis, 1991; Cummins and Bradford, 2005), they adjust their responses to the seemingly spatial distance towards the personae ('paraproxemity': Meyrowitz, 1986), and the personae's attractiveness (Klimmt, Hartmann, and Schramm, 2006).

Research on PSI and PSR has gained popularity in the past. However, progress in the field may have suffered from a lacking clear distinction of both constructs. Past research tended to treat PSI and PSR interchangeably. In their seminal article, Horton and Wohl (1956) addressed PSI as the "illusion of a face-to-face *relationship* with the performer" (p. 215, highlighted by the authors). Quite similarly, uses-and-gratifications research and neighboring approaches define PSI as a long-term involvement with the persona (Rosengren et al., 1976; Rubin, Perse, and Powell, 1985). Rubin und McHugh (1987), for example, understand PSI as a "one-sided interpersonal *relationship* that television viewers establish with media characters" (p. 280; highlighted by authors). And Grant, Guthrie and Ball-Rokeach (1991) define "parasocial interaction [as] a *relationship* between viewers and television personalities" (p. 782, highlighted by authors). Clearly, potential boundaries between PSI and PSR blurred in past research.

Recently, however, researchers called for a clearer distinction between PSI and PSR (Giles, 2002; Vorderer, 1998; Schramm et al., 2002). In light of these recent approaches, PSI is bound to the interpersonal processes between persona and user that take place during media exposure. In contrast, PSR stands for the cross-situational *relationship* a viewer or user holds with a persona, which may include specific cognitive, affective, and behavioral components. While PSI is restricted to the duration of media exposure, PSR can endure beyond a single exposure sequence, like a friendship that exists between two persons beyond their face-to-face communication sequences. As a consequence, a first PSI sequence between a viewer and a persona is able to constitute a PSR, while this PSR in turn is able to influence future motivations and selection processes as well as PSI processes in subsequent media exposure sequences (Gleich, 1997).

According to Hartmann (2008), PSI can be further broken down into two related phenomena, paracommunication and parasocial processing. *Paracommunication* is about users' subjective feeling to be engaged in a give-and-take with the personae, as the media characters seem to adjust their behavior to their responses. In this respect PSI stands for users' feeling to be part of a *reciprocal* social interaction during media exposure, although they subjectively know, or it is least clear from an objective point of view, that this feeling is evoked by an illusion (i. e., the personae only pretend to be aware of users' responses, whereas they can actually only anticipate, but not observe, the behavior). Paracommunication comes closest to what Horton and Strauss (1957, p. 580) originally seemed to have in mind with the term PSI when they stated that "parasocial interaction resembles personal interaction in that one party [the persona] appears to address the other(s) [the user] directly, adjusting his course of action to the latter's responses. Insofar as the other [the user] responds as suggested, he may experience the encounter as immediate, personal, and reciprocal, but these qualities are illusory and are presumably not shared by the speaker".

PSI may however, also be understood in a somewhat broader manner, for example as *parasocial processing*. The term 'parasocial processing' captures all kinds of users' responses towards personae, regardless of whether users have or do not have the feeling that the personae adjust their behavior towards their presence. Thus, parasocial processes may still occur if users do not feel like being part of a reciprocal encounter. Accordingly, parasocial processing may simply be seen as processes of person perception that set in as soon as a user encounters a persona. In the remainder of this paper, PSI will be understood as parasocial processing.

PSI as parasocial processing

PSI, if understood as parasocial processing, manifests itself in different forms, such as rising interest in a persona, intensive thoughts and deliberations, tense body movements, agile facial expressions and gestures, and/or speaking to the persona that is displayed on the TV screen. Due to a wide range of concurring processes, PSI can be classified, similar to involvement, as a kind of *meta-concept* that is composed of some narrower concepts, such as: attention, comprehension, knowledge activation, evaluation, social comparison, sympathy, empathy, emotional contagion, or physical activity (Giles, 2002; Schramm, 2008; Klimmt et al., 2006).

In a nutshell, PSI as parasocial processing is about users' cognitive, affective, and behavioral responses to depicted media characters. It can

be understood as a type of interpersonal involvement (see also Rubin, Perse, and Powell, 1985). Wirth (2006) defines involvement "as the perceived connection between and individual and the mass media content on the one hand, and the degree to which the individual interacts psychologically with a medium or its message, on the other" (Wirth, 2006, p. 201). Likewise, parasocial processing may be defined as the degree to which the individual interacts psychologically with a media character. In addition, if users respond to the appearance of media characters, parasocial processes are activated that may also foster involvement in a media offering (Green, Brock, and Kaufman, 2004). Research on PSI as parasocial processing therefore seems to tap a pivotal aspect of users' reception process. Illuminating the way how users parasocially respond to different media characters across varying contexts may therefore contribute to a better understanding of the reception process.

A differentiated conceptualization of PSI as parasocial processes that take place during exposure can be found in the Two-Level Model of PSI (Hartmann, Schramm, and Klimmt, 2004; for an English summary see Klimmt et al., 2006). According to the model, PSI is composed of a cognitive, affective, and/or behavioral response. The processes underlying these responses are expected to set in immediately and rather automatically once a persona is encountered. Therefore, a media user cannot *not* parasocially interact with a displayed persona, but always responds in some way. Only the breadth and intensity of the underlying parasocial processes may vary (note 1). With immediate responses to a persona's presence, the processes may change dynamically within the course of media exposure.

Following the proposed model, users' parasocial processing can be intensified the more a persona addresses users directly, the more a persona is obtrusively displayed on the TV screen (obtrusiveness), and the more a persona is persistently displayed throughout the exposure episode (persistence). Drawing on past research (Hoffner and Cantor, 1991), the model further argues that PSI processes may be affected by a character's outer appearance (physical attractiveness), his/her inner appearance (character attractiveness), and his/her success (task attractiveness). In addition, parasocial processing may also depend on factors of the viewers, such as personality traits or situational motivations. The model further hypothesizes that intense parasocial processing will immerse a user into the mediated environment (see 'transportation', Green et al., 2004) and foster a feeling of presence (Lee, 2004; ISPR, 2001).

In accordance with psychological classifications, the model distinguishes a (1) perceptual-cognitive, (2) affective, and (3) behavioral response towards personae (table 1). The *perceptual-cognitive response* comprises processes such as persona perception, persona evaluation, ac-

Table 1. *Users' responses towards TV persona and underlying parasocial processes.*

Response	Process	Item example
Cognitive	1. attention allocation	I carefully followed the behaviour of PERSONA.
	2. comprehension of persona's action and situation	I hardly thought about why PERSONA did certain things s/he did. (inverted)
	3. activation of prior media and life experience	I kept wondering if I knew persons that are similar to PERSONA.
	4. evaluations of persona and persona's actions	I became aware of aspects of PERSONA that I really liked or disliked.
	5. anticipatory observation	I kept asking myself how things would evolve around PERSONA.
	6. construction of relations between persona and self	Occasionally, I wondered if PERSONA was similar to me or not.
Affective	1. sympathy/antipathy	Sometimes I really loved PERSONA for what s/he did.
	2. empathy/counter empathy	If PERSONA felt bad, I felt bad as well; if PERSONA felt good, I felt good as well.
	3. emotion contagion	PERSONA left me rather sober and unaffected. (inverted)
Behavioral	1. nonverbal behavior (e. g. mimics, gestures)	Whatever PERSONA said or did − I kept still. (inverted)
	2. (para-)verbal behavior	Occasionally, I said something to PERSONA on impulse.
	3. behavioral intentions	Sometimes I felt like speaking out on PERSONA.

tivation of memories and own life experiences, or social comparisons between the persona and oneself. The *affective response* relates to positive and negative feelings towards the persona, as well as to emotions that are evoked by the persona. The *behavioral response* covers users' nonverbal behavior (mimics and gestures), verbal ("Oh George Clooney − you are the greatest!") and paraverbal behavior (e. g., harrumphing, groaning, respiring), as well as behavioral intentions (e. g., the desire to say something to the persona). The three responses and all underlying parasocial processes are shown in table 1 (for a detailed description of each process see Hartmann et al., 2004; Klimmt et al., 2006; note 2).

According to the theoretical approach, users may respond to a persona without all of the above processes being activated. For example, overt behavioral processes may be rare if people encounter media personae, or they may occur only in very special situations (e. g., while watching an exciting soccer game). Often, users' responses may be characterized by cognitive or affective processes. Users may start to think intensively about a persona, for example, and thus may have a strong cognitive parasocial response, whereas they show no or less affective and behavioral responses. It certainly depends on the constellation of factors bound to the persona and the user, which of the three responses and which of the underlying processes come to the fore. In summary, the model offers a list of 12 different parasocial processes that can theoretically occur separately from each other (table 1).

A review of existing PSI measures

The lack of analytical differentiation in past PSI research translated into a lack of measurements that distinguish between PSI and PSR (Schramm, 2008; Hartmann and Schramm, 2006; Schramm, Hartmann, and Klimmt, 2002). Moreover, no measurement exists so far that would allow a specific assessment of parasocial processing.

Early uses-and-gratification studies considered PSI as a *gratification* that users seek from the media (Auter and Palmgreen, 2000). Accordingly, PSI were often measured as a part of broader item batteries that aimed to include all kinds of motives why users may turn to the media (e. g., Wenner, 1983; Levy and Windahl, 1984). As a consequence, the items that stem from these studies tend to assess a positive interpersonal experience, but not a general parasocial processing. Based on focus group discussions about gratifications from TV news media, Levy (1979) proposed a set of items to measure PSI towards newscasters. The items included entirely positive expressions such as "The newscasters are almost like friends you see every day" or "I like hearing the voices of the newscasters in my house". While such a wording may make sense to grasp PSI as a gratification, they seem inadequate to measure PSI as parasocial processing.

Based on Levy's (1979) measure, Rubin et al. (1985) developed what became the most popular measure of PSI, the *Parasocial-Interaction-Scale*. The scale builds on the conception of PSI as user's involvement with the persona that covers different processes such as "interaction, identification, and long-term identification" (Rubin et al., 1985, p. 156). "That involvement may take many forms including seeking guidance from a media persona, seeing media personalities as friends, imagining being part of a favorite program's social world, and desiring to meet

media performers." (p. 185). Accordingly, the scale includes items like "If my favorite [PERSONA] appeared on another TV program, I would watch that program" or "I feel sorry for my favorite [PERSONA] when he or she makes a mistake."

In light of the proposed differentiation of parasocial phenomena, it seems therefore less clear what the Parasocial-Interaction-Scale exactly measures. The conceptual basis of the scale includes different phenomena such as identification or interaction, and the items themselves seem to reflect an even broader array of phenomena. Thus, the scale seems to be a valid measure of a *positive* relationship that users develop towards a persona, which also seems plausible as the scale draws on Levy's (1979) PSI-as-gratification measure. However, the Parasocial-Interaction-Scale does not seem to capture negative relationships, nor, which is more important in the present context, does it seem to reflect users' immediate responses towards persona throughout exposure (Hartmann and Schramm, 2006). Whereas Rubin et al. (1985) found the scale to have an internally consistent one-dimensional structure (Alpha = .93), a German version of the scale by Gleich (1997) often produces a two- or three-dimensional structure. Another limitation of the scale is that is was initially developed "to measure feelings of audience relationship with local *television news personalities*" (Rubin et al., 1985, p. 176; highlighted by authors). If the scale is applied to context other than television news, it needs to be modified and supplemented (see Hartmann and Schramm, 2006, for a review).

Similar criticisms of the Parasocial-Interaction-Scale have been issued by Auter and Palmgreen (2000), who therefore developed a new instrument to measure PSI; the *Audience-Persona Interaction Scale* (Note 3). Auter and Palmgreen developed the scale in the context of TV sitcoms. Based on qualitative interviews with open-ended questions (e. g., "What is it about the characters on your favorite sitcom that attracts you?"), they generated a pool of 47 items that they then factor-analyzed in a second study, to end up with four inductively derived dimensions across 22 items. They interpreted the resulting four factors as "identification with favorite character" (e. g., "[PERSONA] reminds me of myself"), "interest in favorite character" (e. g., "I would like to meet the actor who played [PERSONA]"), group identification/interaction" (feeling a part of the TV 'family' group, e. g. "[PERSONA]'s interactions are similar to mine with friends."), and "favorite character problem solving abilities" (e. g., "I like the way [PERSONA] handles problems", p. 82−83).

The Audience-Persona Interaction Scale seems to be a valid measure to assess users' positive PSR to their *favorite* character in a TV *sitcom-show*. It seems unsuitable, however, to reflect the intensity and breadth of user's parasocial engagement with less liked or even disliked charac-

ters. In addition, as the scale has been derived in an inductive fashion, it seems to be specifically bound to TV sitcoms. Two of the four dimensions, i. e., 'group identification' and 'favorite character problem solving abilities', seem to be less applicable to parasocial engagement with many other media characters, such as TV news-casters or virtual video game characters. In addition, some items of the scale only work for fictional characters, as they assume an actor that plays a role (e. g., "I would like to meet the *actor* who played [PERSONA]"; highlighted by authors). Most importantly for the present approach, the scale clearly does not assess users' parasocial processing during exposure (note 4).

As the review of existing PSI measures revealed, no instrument exists so far to assess users' parasocial processing. Virtually all scales that have been published in the past tend to measure PSR instead of PSI. In addition, every instrument we know of focuses on parasocial engagement with *liked* or *favorite* characters. It seems plausible, however, that users can also respond with intense parasocial processes to the appearance of characters they do not really like or even dislike (Konijn and Hoorn, 2005). In sum, no measurement tool exists so far to assess the intensity and breadth of users' parasocial processing of TV characters. In the remainder of this article, we therefore describe the development and initial testing of a theory-driven set of scales (called "PSI-Process Scales") that can be applied directly after TV exposure to measure both the intensity and breadth of parasocial processes. The PSI-Process Scales aim to measure the intensity of parasocial processes independent of a users' liking or disliking of the persona. They should also be suitable for all kinds of TV personae and genres without a need to modify the items.

Construction principles of the PSI-Process Scales

The aim of the present approach was to develop a set of scales that can be applied directly after TV exposure in order to measure a users' parasocial processing during media exposure (note 5). The envisioned scales should be able to measure the valence (positive vs. negative), the intensity, and the breadth (or variety) of PSI processes. As TV viewers react parasocially to all perceived personae of a given TV offering, and as these PSI processes can differ significantly, the scales should be designed in a way that the items can be rated only with respect to a certain/specific persona. As the number of perceptual senses that can trigger PSI processes have implications for the wording of the items (e. g., PSI radio items differ from PSI TV items in their possibility to include visual impressions), we decided to restrict the scales to audio-visual media contexts (especially TV exposure). In addition, we considered the follow-

ing criteria in the initial item development (cf. DeVellis, 1991; Spector, 1992):

- We aimed to develop scales for each of the 12 theoretically proposed parasocial processes; with four positively and four negatively worded items for each scale. In sum, 6 parasocial processes were representing user's cognitive response, 3 user's affective and 3 user's behavioral response towards a persona.
- We strived to develop items that cover different facets of each parasocial process, instead of representing only linguistic variations of one aspect (i. e., multiple-facet-measurement instead of iteration-measurement).
- We aimed to word the items in such a way that they fit all TV formats. Thus, we tried to ensure that the scales do not have to be modified for different TV contexts, so that they allow for empirical comparisons between standardized studies, later.
- We strived for an item wording that fit all possible TV personae (e. g., actors, anchormen, sportsmen, comic characters, etc.) without a need to modify the items in future studies.
- We aimed to build scales that can be applied even if the persona shows a specifically constricted behavior (e. g., if the persona is not talking or not addressing the viewer).
- We aimed to word items in such a way that they are suitable for both positive and negative PSI, because otherwise distinct measurement tools for positive and negative PSI would have to be developed (and applied in future studies). We tried to develop scales that assess the breadth and intensity of the PSI processes independent of a character being liked or disliked (note 6).

Altogether, 14 scales (note 7) with eight items for each scale were developed (all in all 112 items; for item examples see Table 1). All items could be answered on a 5-point scale (1 = not at all, 5 = very much). The PSI valence was measured by an additional single 6-point item (1 = very unsympathetic; 6 = very sympathetic), which was applied at the beginning of the questionnaire. Besides measuring the valence, this item also works as a filter variable: If the subject reported a more positive valence (values 4−6), only the sympathy and empathy scales (as part of the affective response) were applied. In the case of a more negative valence (values 1−3), subjects only needed to fill out the antipathy and counter empathy scales (as part of the affective response). In addition, every subject had to answer, independently from the valence, the same six cognitive and three behavioral scales, as well as the third affective scale (emotional contagion).

Study design and procedure

The PSI-Process Scales were tested in Germany and Switzerland through an online survey of 237 subjects (139 female, 98 male; aged between 14 and 72, $M = 30$, $SD = 11$; 193 subjects with high school or college degrees, 44 subjects with no high school degree). The study was linked and promoted ("TV Exposure Poll: How do you experience persons on the TV screen?") on one of the biggest Swiss Internet portals (bluewin.ch) as well as on different emailing lists of German and Swiss student organizations.

After following the link, subjects were initially informed about the topic and the procedure of the survey. First, they selected a TV genre from a given list of nine relevant TV genres (to reach a sample of different media offers) that they either a) like very much or that they b) do not like at all (the valence was varied to ensure variance in the subjects' PSI valences; the valence was assigned randomly). Secondly, subjects were asked to watch a TV offering of the selected genre within the next few days. After this step, subjects got a reminder email with information about the further procedure and the selected genre included. At the end of this email, subjects were also informed about the questionnaire link they had to contact directly after TV exposure to report their PSI towards a single TV person of the TV program they had watched before.

At the beginning of this questionnaire, subjects were asked to fill in the TV genre and the concrete TV offering they watched. Also, they were asked to describe the persona of this TV offering that they remember best. All subsequent items were automatically adapted to this persona (i. e., across all items, the placeholder 'PERSONA' was replaced by the concrete name of the persona). Additionally, subjects reported how long they had watched the TV offering and how much time passed after watching and before filling out the questionnaire. The time passed reported by the users was cross-checked with the time stamp of the online survey tool and the available time information in the TV program guide. On average, subjects watched their selected TV program for the duration of 41 minutes. Subjects waited, on average, 66 minutes after watching the show and before they visited the online questionnaire.

From the PSI-Process Scales, first, the cognitive and behavioral items were applied in random order. Afterwards, subjects answered the single valence item. Subsequently, all suitable affective items were applied. To enable *validation analyses* between intensities assessed by the PSI-Process Scales and external criteria, subjects were asked to report about different apects that have been theoretically linked to parasocial processing in the Two-Level Model (Hartmann et al. 2004; Klimmt et al., 2006). Assessed aspects included the perceived obtrusiveness of a persona, as well as his/

her persistence and attractiveness (physical, character, and task attractiveness), and users' feeling of presence (i. e., the feeling of being immersed into a media offering; Lee, 2004).

Finally, the questionnaire included some additional context variables that ought to influence the PSI intensities, too, such as 'single vs. group reception', 'distraction during reception' (e. g., through telephone calls), or 'persona recognition' (is the persona well known or not), as well as socio-demographic variables.

The final sample consisted of 63 subjects that reported on negative PSI and 174 subjects that reported on positive PSI ($M = 4.35$; $SD = 1.52$; scale: 1−6). The initial random assignment to TV formats that were either liked or disliked did not lead to equally sized groups of negative and positive PSI. The reason is that subjects could select a persona by themselves when they began to fill out the questionnaire, and most subjects obviously engaged in positive PSI towards persona even though they watched this persona in a disliked format. Average time for completion of the whole online questionnaire was 18.5 minutes.

Results

First, all 14 scales were optimized with regard to a) their homogeneity (measured by Cronbach's Alpha), b) their item total correlations (correlation between each single item and the whole scale: a measure of how good a single item represents the whole scale), and c) their item difficulties (Table 2). Cronbach'a Alpha values could be improved to a level of $\alpha \geq .70$ for all scales by excluding single items. In general, the counter empathy scale was a bit under that level ($\alpha = .69$). With respect to the item total correlation, all items correlated at least with $r = .30$ with their scale, which is satisfying. Item difficulties should be between .20 and .80, and ideally about .50 (Bearden, Netemeyer, and Mobley 1993). All items met these criteria. Only one item of the cognitive scale, 'attention allocation' was too easy (.84), which was expectable because this parasocial process is somewhat of a precondition for all other assessed processes. Users cannot, for example, comprehend and evaluate actions and statements of a persona if they do not pay a certain amount of attention to him or her. Thus, item difficulties also provide some important information on how essential a single process was for users' overall parasocial response. As behavioral PSI may be more uncommon in most media exposure situations, it is not surprising that the related scales showed the highest item difficulties. Based on the psychometric data, 14 homogeneous scales with an adequate item-total-correlation and good item difficulties could be derived (Table 2).

Table 2. *Scale properties: scale homogeneities, item-total-correlations, and item difficulties.*

Response	Process	α	Item-total-correlations	Item difficulties	Number of items per scale (final solution)
Cognitive	attention allocation	.76	0.35−0.59	0.59−0.84	8
	comprehension of persona's action and situation	.85	0.54−0.71	0.35−0.53	8
	activation of prior media and life experience	.76	0.36−0.52	0.23−0.51	8
	evaluations of persona and persona's actions	.82	0.39−0.65	0.42−0.74	8
	anticipatory observation	.86	0.48−0.70	0.35−0.52	8
	construction of relations between persona and self	.86	0.45−0.75	0.30−0.46	8
Affective	sympathy	.77	0.44−0.55	0.30−0.79	8
	antipathy	.88	0.64−0.76	0.49−0.62	5
	empathy	.80	0.49−0.61	0.21−0.70	7
	counter empathy	.69	0.37−0.57	0.23−0.63	5
	emotional contagion	.83	0.49−0.60	0.26−0.57	8
Behavioral	nonverbal behavior (e. g. mimics, gestures)	.78	0.54−0.64	0.40−0.58	4
	(para-)verbal behavior	.79	0.54−0.66	0.25−0.35	4
	behavioral intentions	.79	0.36−0.57	0.28−0.55	8

In a second step, scales were validated to ensure that they measure PSI as parasocial processing and not other media-exposure phenomena. For this purpose, correlations were calculated between indices of the 14 scales and specific persona variables that should determine the PSI intensities according to the Two-Level Model. According to theory, cognitive, affective or behavioral parasocial responses can be intense even if only a single underlying parasocial process is strongly activated. For example, intense cognitive responses may occur as a result of intense evaluations of a persona's actions (process 4), but without much anticipatory observations (process 5). Therefore, a 'maximum index' for each of the three parasocial responses was calculated. To do so, the underlying process with the highest value provided the intensity level of the accordant PSI index (cognitive, affective, behavioural).

Table 3 shows significant correlations between the derived maximum indices and external validation criteria. In line with expectations of the

Table 3. *Correlations between external criteria users' cognitive, affective, behavioral parasocial responses (Maximum-Indices).*

External criteria	Cognitive responses	Affective responses	Behavioral responses
Obtrusiveness	.24**		
Persistence	.16*	.15*	.15*
Physical attractiveness of persona	.26**	.48**	
Character attractiveness of persona	.32**	.68**	
Task attractiveness of persona	.19*	.44**	
Presence	.27**	.33**	.15*

Pearson's r; *: $p < .05$ **: $p < .01$

Two-Level Model, most PSI processes were more intense, the more users perceived certain aspects of the persona (obtrusiveness, persistence, attractiveness). However, not all external criteria showed significant correlations with all three PSI dimensions. For example, a persona's obtrusiveness significantly correlated with cognitive PSI, but not with affective and behavioral PSI, whereas a persona's persistence and a user's presence experience influenced all three PSI dimensions. In sum, results provide first evidence that the PSI-Process Scales are a valid measure of parasocial processing.

Conclusion

The PSI/PSR concept looks back at 50 years of theoretical reflection and empirical research, and still fosters much research. Media offerings that are built around media persons dominate the media landscape. As parasocial processes occur automatically during exposure to those media offerings (Hartmann et al., 2004), PSI belongs to the constitutional elements of person-centered media exposure. Especially for the exploration and explanation of audio-visual media usage, the PSI concept is of central importance. Although research provided valuable insights into how users develop relationships towards media personae (e. g., Rubin and McHugh, 1987), studies about how users perceive and respond to media characters *during exposure* are rare (Konijn and Hoorn, 2004).

The present study therefore presented the PSI-Process Scales as a measurement tool that may help to shed more light on users' parasocial processing during exposure. The scales are derived from a theoretical model and a clear theoretical analysis of PSI. Thus, the PSI-Process Scales should be able to assess PSI more adequately than past measures, which tended to confound PSI and PSR. The total measurement tool contains 14 scales (with four to eight items per scale; see Table 1) that

can be applied as a whole or in parts, based on a researcher's need to focus on specific or all parasocial processes or responses. For example, if the set-up of a study conditions prevents behavioral PSI (e. g., in a laboratory situation), the three scales related to behavioral processes can be neglected. The preliminary results presented here indicate that the scales are capable of displaying the intensity as well as the breadth (multi-dimensionality) of PSI. Furthermore, the scales can be applied to both positive *and* negative PSI and they should be usable across all kinds of TV formats and with respect to all kinds of TV personae, without changing the item wording.

Future studies seem to be in order to further validate the PSI-Process Scales (see Schramm and Wirth, 2006). For example, items of the scales have been developed in German and the psychometric qualities of the scales have been derived in a German-speaking sample. A translation of the scales into English seems to be fruitful, but also requires further testing of the scales' quality. In the present study, we could only offer a first validation of the PSI-Process Scales through correlations between PSI dimensions and external criteria that were derived from the Two-Level Model. However, future studies should continue this validation process by correlating the scales to other criteria. In addition, the scales should be tested in different media contexts with bigger and also lower educated samples. A related question is whether the 14 scales can be reconstructed in factor analyses. Such an analysis would require at least 600 subjects in order to test all the PSI-Process Scales. Another relevant issue that needs further examination is the question to what extent such a retrospective post-viewing measurement as the present one is able to reflect the PSI process during media exposure adequately. Finally, the current set of scales is quite lengthy. Therefore, a short-version of the overall instrument seems to be handy in order to ease applications in the future.

The challenge for future research is to provide measurement standards to build up standards of PSI/PSR findings that are generated, confirmed, and validated across several studies using the same measurements. In this respect, the PSI-Process Scales may emerge as a valuable tool to assess users' parasocial responses (and underlying processes) towards media personae. Our hope is that, once a standardized and well-proven set of scales has been established, future studies may allow for a systematic comparison of findings related to PSI as parasocial processing across different media contexts and towards different media personae.

Notes

1. Borrowing from dual-process models of person perception (Brewer, 1988; Fiske and Neuberg, 1990), the Two-Level Model of PSI particularly distinguishes between

a highly automatic, spontaneous, stereotype-based, heuristic processing of a persona (low-level-PSI), and a more motivated, elaborate, and individuating processing of a persona (high-level-PSI). Hence the name, Two-Level Model of PSI.

2. The named processes have been derived from the literature of interpersonal communication, social psychology, and media psychology. The list may not be exhaustive, as research on human interaction is a very rich field and additional (or more precisely defined) processes of how people respond to each other may still be distilled from further literature analysis and applied to the reaction to media personae (for example, an alternative process structure is suggested by Hoorn and Konijin, 2004).
3. Other measurements tools that have been offered so far clearly aim to measure PSR, such as Gleich's (1997) scales of PSR quality, or the the Parasocial-Breakup-Scale by Cohen (2003). The Breakup-Scale consists of 13 items that assess users' anticipated distress and coping strategies linked to a potential loss of their favourite TV personality. The scale therefore indirectly measures the intensity of users' PSR.
4. Only the "interest in favorite character" − subscale includes three items that may be interpreted as a parasocial processing of a *favourite* TV character, e. g., "I enjoyed trying to predict what [PERSONA] would do" or "I care about what happens to [PERSONA]."
5. The full German version of the scales can be requested from the authors of this article. An English version is planned, but also needs further psychometrical testing.
6. This approach worked out, except for the PSI processes underlying the affective response.
7. As it was not possible to formulate items for sympathy, antipathy, empathy, and counter empathy with *neutral* valence, here, distinct scales for each of the four constructs had to be developed.

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